REMARKS

Claims 31-56 are pending.

Claims 31-56 are rejected.

Claims 35, 40-42, 47, and 52-54 are amended

The Applicant respectfully asserts that the amendments to Claims 35, 40-42, 47, and 52-54 and incorporated by reference in any claims depending therefrom, are not narrowing amendments made for a reason related to the statutory requirements for a patent that will give rise to prosecution history estoppel. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 122 S. Ct. 1831, 1839-40, 62 U.S.P.Q.2d 1705, 1711-12 (2002); 234 F.3d 555, 566, 56 U.S.P.Q.2d 1865, 1870 (Fed. Cir. 2001).

I. CLAIM OBJECTIONS

The Examiner objected to Claims 36 and 48 as having informalities: "it refers to a step of receiving a request from one of the Client systems to test a network site coupled to the network wherein the N host distributed devices receive the request from the Client system." Claim 36 recites "the method of claim 31 further comprising the step of receiving a request from one of the Client systems to test a network site coupled to the network." Since Claim 36 states that it is the method of Claim 31 further comprising the step, the Applicant asserts that Claim 36 is clearly adding a step to the steps recited in Claim 31. Claim 48 recites the same limitation for the computer program product of Claim 43. The Examiner states that correction is required, however, the Applicant does not see what needs to be changed.

II. REJECTION UNDER 35 U.S.C. § 112

The Examiner rejected Claims 35 and 47 under *35 U.S.C. § 112*, first paragraph, as failing to comply with the enablement requirement. The Examiner

states that the claims (35 and 47) contain subject which is not described in the specification in such a way to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the specification includes no reference or information that would lead one of ordinary skill in the art to continuously run the test program and incrementally increase the number of distributed computing devices until all of the non-failure (as opposed to unavailable) distributed computing devices are being used for only one task.

The Specification describes in detail the various configurations that are possible with the configuration described in Claim 31 of the present invention. The preamble of Claim 1 lays the foundation of a particular one of these configurations as follows:

a distributed processing system having a network coupling a number M of Host distributed devices to process workloads for the distributed processing system, a plurality of Client systems requesting processing of the workloads, one or more network sites coupled to the network for providing services upon request to a multiplicity of Host distributed devices including at least the M Host distributed devices, and a Server system for selectively distributing the workloads for processing by the distributed processing system. One of ordinary skill in the art understands that the Host distributed devices, server, Client system and even the network site are names to distinguish computers that at any one time have different primary functions but at some other time may be reconfigured with software. A Host distributed device may request that the distributed processing system process a workload (becoming a Client), a Client may agree to process workloads for the distributed processing system and become a Host distributed device, etc. Claim 31 recites that a number M of Host distributed devices are coupled with a network to process workloads for the distributed processing system. The distributed processing system has a plurality of Client systems that request processing of workloads by the distributed processing system. Likewise, the distributed processing system has a server that selectively

distributes workloads to the M distributed devices for processing. In addition, there is one or more network sites coupled to the network for providing services upon request to a multiplicity of Host distributed devices including at least the M Host distributed devices. The network sites may provide services to more than the M Host distributed devices but it at least provides services to the M Host distributed devices. In the Specification and relative to FIG. 7A, page 36, line 11 through page 37, line 12, two types of possible tests that may be desired using the invention of Claim 31 are discussed. In particular, "load testing refers to testing what a particular network site's infrastructure can handle in user interactions. "An extreme version of load testing is a denial-of-service attack, where a system or group of systems intentionally attempt to overload and shut-down a network site." In this section, it further states that "load testing, QoS testing and any other site testing may be conducted with any number of interactions from client systems desired, and the timing of those interactions may be manipulated and controlled to achieve any desired testing parameters. It is further stated in the Specification that Site testing is typically desired to determine how a site or connected service performs under any desired set of test circumstances. With the distributed processing system of the present invention, site performance testing may be conducted using any number of real client systems (Host distributed devices) 108, 110 and 112; rather, than simulated activity that is currently available.

Results of processing workloads are returned to the server distributing the workloads as described in the Specification. See the detailed description of FIG. 7B, pages 37-38 in the Specification of the present invention. If it is desired to load test a site to determine when it fails, one of ordinary skill in the art would understand that the answer is not already known or there would be no reason to run the test. Therefore, the server would need to determine by some means how many of the M Host distributed devices that are coupled via the network to process workloads for the distributed processing system are to be allocated to, for example, overload a network site. In Claim 31, the following is recited:

(a) a software agent is sent to a number N of Host distributed devices selected from the M Host distributed devices, the software agent configured to start a program execution at a predetermined first time interval, (b) a test program is sent to each of the N Host distributed devices, wherein the test program is configured to request a service from a first network site selected from the one or more network sites, and (c) a request is sent to each of the N Host distributed devices to concurrently start execution of the test program at the first time interval.

Claim 31 recites the steps for a first "attack" using N out of the M Host distributed devices to attempt to overload (load testing) the first network site selected from the one or more network sites. If the N Host distributed devices are requesting a service form the first network site, then they will either be successful in their endeavor or they will fail depending on how long the Host distributed devices wait for the service (may be a test variable).

Claim 35 has been amended to change step (f) to repeat starting at step (a). This assures that when N is increased the Host distributed devices not included in the first pass of N receive the actions of steps (a) and (b) in Claim 31. In amended Claim 35, the following is recited:

(d) a determination is made whether any of the N Host distributed devices had a failure in receiving the service requested by running the test program, (e) the number N is increased if no failure was detected, and (f) steps a) through e) until the failure is detected from at least one of the N Host distributed devices or N is equal to M. One of ordinary skill in the art would understand that if one is trying to determine the capability of the first network site in handling simultaneous requests for a service (e.g., load testing) it would be natural to analyze results and increase the number N Host devices requesting the service (loads) until all possible (M) loads have been tried.

The Applicant asserts that FIG. 7A and its detailed description provide the necessary enablement for Claim 35. Claim 47 adds the same limitation to the computer program product of Claim 43. Therefore, the Applicant respectfully asserts

that the rejections of Claim 35 and Claim 47 under *35 U.S.C. § 112*, first paragraph, as failing to comply with the enablement requirement are traversed by the above arguments.

Claims 41 and 53 have been amended changing "period" to –interval- to correct the antecedent problem as cited by the Examiner. Therefore, the Applicant respectfully asserts that the rejections of Claim 41 and Claim 53 under *35 U.S.C. § 112*, second paragraph, as failing to particularly point out and distinctly claim the subject matter the Applicant regards as his invention are traversed by the stated amendments.

III. REJECTION UNDER 35 U.S.C. § 102

The Examiner rejected Claims 31, 36-40, 43, 48-52, and 54 under *35 U.S.C. § 102(a)* as being anticipated by *Armentrout et al.* (WO 012/14961 A2) (hereafter "*Armentrout*"). In rejecting Claim 31, the Examiner states that *Armentrout* discloses the elements of Claim 31 citing multiple elements of *Armentrout*.

For a reference to anticipate a claimed invention, the reference must disclose every aspect of the claimed invention. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Since anticipation requires a reference to disclose every aspect of the claimed invention, the Applicant has elected to concentrate on those items of Claim 31 not disclosed by *Armentrout*. These items are the "one or more network sites coupled to the network for providing services upon request to a multiplicity of Host distributed devices including at least the M Host distributed devices", step (a) sending a test program to each of the N Host distributed devices, wherein the test program is

configured to request a service from a first network site selected from the one or more network sites, and (b) sending a request to each of the N Host distributed devices to concurrently start execution of the test program at the first time interval.

The Examiner states that *Armentrout* discloses the one or more network sites and cites elements 30, 32, 34, and 36 in Fig. 1 of *Armentrout*. A network site is typically like an Internet web page that provides a service to a number of other computers (e.g., Host distributed devices). These network sites may be Hosted on a server "farm" that provide the actual processing power necessary to provide the service. The service may be selling a product, a search engine, an online dictionary, etc. If a network site is a business selling an online service, then the number of customers that can concurrently request the purchase of the service during a particular time interval is important. Businesses do not want to lose customers to competing businesses in other network sites because of poor service. Certain on-line business transactions using a network site may experience a "crash" if too many customers request one or different services concurrently. If a business wants to be assured that its network site is robust and can handle a desired traffic, then the business would need to test their network site.

The Examiner states that network 29 in Fig. 1 of *Armentrout* discloses the one or more network sites recited in Claim 31. The Applicant asserts that while a network may provide access to a network site, it is not in itself a network site. Claim 31 recites one or more network sites coupled to the network for providing services upon request to a multiplicity of Host distributed devices including at least the M Host distributed devices. In Claim 31, the one or more network sites must be at least one computer (single or hosted) not within the M Host distributed devices. The one or more network sites, however, are coupled to the network for providing services upon request to a multiplicity of Host distributed devices but at least the M Host distributed devices that are also coupled to process workloads for the distributed processing system. The Examiner states that the network site of Claim 31 is network 29 of Fig.

1, the network coupling the M Host distributed devices and the network site is network 28, and the services provided by the network site is e-commerce 31. The Applicant is not clear what *Armentrout* meant the combination of network 29 and e-commerce 31 to represent as there is no description of these elements in the specification of *Armentrout*. Since *Armentrout* did not show that network 29 is bi-directionally coupled to server 26, it is not clear to the Applicant the reason for showing server 26 bi-directionally coupled to networks 26 and 28 and unidirectionally coupled to network 28. If the Examiner is stating that e-commerce 31 is one of the one or more network sites recited in Claim 31, then there should be some statement in *Armentrout* to this affect. *Armentrout* does not disclose anywhere in his disclosure that he conducts any network site testing. The Examiner states that both the N Host distributed devices, and the M Host distributed devices are the same thing (elements 30, 32, 34, and 36 of Fig. 1 of *Armentrout*). For Claim 31, the N Host distributed devices are a sub-set of the M Host distributed devices and they are the only ones that receive the software agent in step (a) of Claim 31. The Examiner also states that the M Host distributed devices include the virtual cluster described on page 3, lines 1-2 of *Armentrout*. In this recitation, *Armentrout* states that "it is yet another objective of the present invention to allow clients to create a virtual cluster of machines of client-definable computational power to run client tasks." According to this definition, *Armentrout* is grouping a number "providers" to act as a single provider. Again, *Armentrout*'s virtual cluster would be selected as a sub-set of providers 30, 32, 34, and 36 and would not represent the M Host distributed systems coupled with the network to process workloads for the distributed processing system of Claim 31. The Applicant asserts that *Armentrout* does not disclose the invention of Claim 31, wherein the network site provides services to a multiplicity of Host distributed devices including at least the M Host distributed devices (coupled with the network to process workloads for the distributed processing system).

The Examiner states that *Armentrout* teaches step (a) of Claim 31 and cites (CE) of *Armentrout* as the software agent and page 9, lines 12-14 as disclosing that

the software agent is configured to start a program execution at a predetermined first time interval. While *Armentrout* does disclose that the CE (compute engine) is provider software for managing the launch and execution of tasks, *Armentrout* does disclose starting a program execution at a predetermined first time interval. The present invention starts program execution at a predetermined first time interval in all of the N Host distributed devices to cause a simultaneous request for a service from the first network site of Claim 31. Since the Applicant has shown that *Armentrout* does not disclosure network site testing, he would have no motivation to start program execution at a predetermined first time interval in all of the N Host distributed devices.

The Examiner states that *Armentrout* teaches step (b) of Claim 31 and cites "assessing capabilities, page 19, lines 18-21." In this recitation, *Armentrout* states "To characterize and assess the capabilities of provider computers, in order to perform task scheduling effectively, the CTS executes certain benchmark tasks on provider computers." Step (b) of Claim 31 recites "sending a test program to each of the N Host distributed devices, wherein the test program is configured to request a service from a first network site selected from the one or more network sites." The test program of *Armentrout* is disclosing is used to assess the provider computers. Nowhere does *Armentrout* disclose sending a test program to his provider computers to request a service from the e-commerce 31 which the Examiner asserts is a network site. The Applicant asserts that *Armentrout* does not disclose step (b) of Claim 31 of the present invention.

The Examiner states that *Armentrout* discloses step (c) of Claim 31 and cites elements 30, 32, 34, and 36 of Fig. 1 of *Armentrout* and the virtual cluster described on page 3, lines 1-2 of *Armentrout* as disclosing the N Host distributed devices and "simultaneous execution", page 24, lines 16-17 of *Armentrout* as disclosing "concurrently starts execution of the test program at the first time interval" as recited in Claim 31. *Armentrout* states on page 24, lines 16-17 that "The system launches the

task simultaneously on all the provider computers that comprise a **virtual node**." *Armentrout* further describes what he means by the term "launched" with the following "As noted earlier the task is "launched" when it is scheduled. Earlier refers to the following on page 20, lines 7-12 of *Armentrout*:

"After the client defines the tasks to be executed, they are provided to the central server of the present invention for "launching," i.e., the placement of the task in a queue for scheduling and ultimate distribution to provider computers. For billing and compensation purposes, a task is "launched" when it is scheduled. In this way, the latency from a task sitting in queue is attributed to the provider computer and so considered part of the provider computer's intermittent "unavailability." Therefore, *Armentrout* considers a task launched when it is put in a queue for execution not when a provider system actually starts execution. The present invention sends a software agent to each of the N Host distributed devices configured to start execution of a test program at a first time interval in step (b). In step (c) a request is sent to each of the N Host distributed devices to concurrently start execution of the test program at the first time interval. The Applicant asserts that *Armentrout* does no disclose step (c) of Claim 31. *Armentrout* has no motivation to simultaneously start execution of a test program in each of N Host distributed devices as recited in Claim 31. *Armentrout* assumes, for billing purposes, that as soon as he queues and task for the provider systems in a virtual node, the task is launched. Further, as soon as *Armentrout* receives results from one of the providers in the virtual node, he cancels the executions in the other providers. Claim 43 is directed to a computer program product implementing the steps of Claim 31. The Examiner rejected Claim 43 for the same reasons as Claim 31. Therefore, the Applicant respectfully asserts that the rejections of Claims 31 and 43 under *35 U.S.C. § 102(a)* as being anticipated by *Armentrout* are traversed by the above arguments.

The Examiner states that *Armentrout* discloses the step recited in Claims 36 and 48 and cites *Armentrout* page 19, line 24 through page 20, line 20. Clam 36 is

dependent from Claim 31 and contains all the steps of Claim 31. Claim 36 adds the limitation that a request is received from one of the Client systems to test a network site coupled to the network. The Applicant has shown that *Armentrout* does not teach all the limitations of Claim 31. *Armentrout* page 19, line 24 through page 20, line 20 discloses how his virtual cluster works and adds nothing regarding the steps recited in Claim 31. In Claim 36, a request is received from one of the Client systems of Claim 31 to test a network site coupled to the network. As *Armentrout* makes no disclosure regarding testing a network site, *Armentrout* has no motivation to receive a request from any system to test a network site (e-commerce 31 as asserted by the Examiner). Claim 48 adds the same limitation to Claim 43 that Claim 36 adds to Claim 31. Claim 43 is directed to a computer program product implementing the steps of Claim 31. The Examiner rejected Claim 48 for the same reasons as Claim 43. Therefore, the Applicant respectfully asserts that the rejections of Claims 36 and 48 under *35 U.S.C. § 102(a)* as being anticipated by *Armentrout* are traversed by the above reasons and for the same reasons as Claims 31 and 43.

The Examiner states that *Armentrout* discloses Claims 37 and 49 and cites "assess capabilities" page 19, lines 18-21. Claim 37 is dependent from Claim 31 and contains all the steps of Claim 31. Claim 37 adds the limitation that the test program sent to each of the N Host distributed devices is the same test program. The Applicant has shown that *Armentrout* does not teach all the limitations of Claim 31. *Armentrout*, page 19, lines 18-21 discloses how he assesses capabilities of his provider systems and adds nothing regarding the steps recited in Claim 31. In Claim 37, the test program sent to each of the N Host distributed devices is the same test program. As *Armentrout* makes no disclosure regarding testing a network site, *Armentrout* has no motivation to send to each of the N Host distributed devices the same test program. Claim 49 adds the same limitation to Claim 43 that Claim 37 adds to Claim 31. Claim 43 is directed to a computer program product implementing the steps of Claim 31. The Examiner rejected Claim 49 for the same reasons as Claim 43. Therefore, the Applicant respectfully asserts that the rejections of Claims

37 and 49 under *35 U.S.C. § 102(a)* as being anticipated by *Armentrout* are traversed by the above reasons and for the same reasons as Claims 31 and 43.

The Examiner states that *Armentrout* discloses the step recited in Claims 38 and 50 and cites "((i) CPU speed, (ii) bandwidth, (iii) intermittent or constant connectivity, etc.," page 19, lines 25-28. Claim 38 adds the limitation that the test program sent to each of the N Host distributed devices is a different test program. The Applicant has shown that *Armentrout* does not teach all the limitations of Claim 31. *Armentrout* page 19, lines 25-28 discloses how his virtual cluster works and adds nothing regarding the steps recited in Claim 31. In Claim 38, the test program sent to each of the N Host distributed devices is a different test program. As *Armentrout* makes no disclosure regarding testing a network site, *Armentrout* has no motivation to send to each of the N Host distributed devices a different test program. Claim 50 adds the same limitation to Claim 43 that Claim 38 adds to Claim 31. Claim 43 is directed to a computer program product implementing the steps of Claim 31. The Examiner also states that it is inherent that, when assessing capabilities, such as CPU speed and/or bandwidth, as in *Armentrout*, that different services can be broken down and searched for individually in separate test programs for services. The Examiner cites *Armentrout*, Fig. 1, e-commerce 31, "bandwidth minimums", "CPU speed", page 19, lines 25-28, "billing", "cost", and "checking on-line ledge", page 18, lines 13-16. Claim 38 is directed to testing a network site by concurrently executing different test programs to load test a first network site. Claim 38 is not directed to assessing the capabilities of individual ones of the N Host distributed devices. The Examiner rejected Claim 50 for the same reasons as Claim 38. Therefore, the Applicant respectfully asserts that the rejections of Claims 38 and 50 under *35 U.S.C. § 102(a)* as being anticipated by *Armentrout* are traversed by the above reasons and for the same reasons as Claims 31 and 43.

The Examiner states that *Armentrout* discloses Claims 39 and 51 and cites *Armentrout*, page 39, lines 1-13. Claim 39 is dependent from Claim 31 and contains

all the limitations of Claim 31. In Claim 31, the N Host distributed devices are coupled to the network and selected from the M Host distributed devices to test a first network cite from the one or more network cites. Claim 39 adds the limitation that these N Host distributed devices were coupled to the network in response to an incentive. The Applicant has shown that *Armentrout* does not disclose any network site testing; therefore, *Armentrout* cannot be disclosing coupling the N Host devices of Claim 31 to the network in response to an incentive. The Examiner rejected Claim 51 for the same reasons as Claim 39. Therefore, the Applicant respectfully asserts that the rejections of Claims 39 and 51 under *35 U.S.C. § 102(a)* as being anticipated by *Armentrout* are traversed by the above reasons and for the same reasons as Claims 31 and 43.

The Examiner states that *Armentrout* discloses Claims 40 and 52 and cites *Armentrout*, Fig. 1, network 29. The Examiner states that *Armentrout* discloses that network 29 is an internet web site. The Applicant asserts that an internet web site hosted on a computer may be connected to a network, but network 29 is not an internet web site. The Examiner further states that it is inherent that an e-commerce 31 (*Armentrout* does not say e-commerce 31 is a service) would operate an internet web site in order for the client check online ledgers or to transfer money or credits to the CTS 26 in order to continue using the distributed procession power of the system. The Applicant has shown that *Armentrout* offers no description of e-commerce 31, only what can be gleaned from Fig. 1. All we know is that e-commerce 31 is coupled to network 29 which in turn is unidirectionally coupled to server 26. The Applicant does not know how the Examiner determined that e-commerce 31 is inherently an internet web site. Claim 40 is dependent from Claim 31 and contains all the limitations of Claim 31. Claim 40 adds the limitation that the first network site is an internet web site. The Applicant has shown that *Armentrout* does not disclose all the limitations of Claim 31. The Examiner rejected Claim 52 for the same reasons as Claim 40. Therefore, the Applicant respectfully asserts that the rejections of Claims

40 and 52 under *35 U.S.C. § 102(a)* as being anticipated by *Armentrout* are traversed by the above reasons and for the same reasons as Claims 31 and 43.

IV. REJECTION UNDER 35 U.S.C. § 103(a)

The Examiner rejected Claims 32-34, 42, 44-46, and 54 under *35 U.S.C. §103(a)* as being unpatentable over *Armentrout* in view of U.S. Patent No. 6,078,953 to *Vaid et al.* (hereafter "*Vaid*").

For a reference to anticipate a claimed invention, the reference must disclose every aspect of the claimed invention. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Claim 32 is dependent from Claim 31 and contains all the limitations of Claim 31. Claim 32 adds the step of receiving, in the Server system, a status from each of the N Host distributed devices in a second time interval following the first time interval, the status indicating a quality of providing the service (of Claim 31) to each of the N Host distributed devices. In Claim 31, the test program is configured to request a service from a first network site selected from the one or more network sites. Further, in Claim 31, a request is sent to each of the N Host distributed devices to concurrently start execution of the test program (requesting the service from the first network site) at the first time interval. The Examiner states that *Armentrout* discloses Claim 32 and cites "benchmark tests are competed", page 25, line 21 of *Armentrout*. In this recitation, *Armentrout* discloses that, "for each provider computer, the system measures CPU speed by sending to the provider computer certain benchmark tests that have known response times. The bandwidth is also measured. As noted earlier, these measures are periodically updated." *Armentrout* discloses how he measures the performance of his provider computers (Host

distributed devices). Claim 31 and Claim 32 are directed to method steps wherein a test program in each of N Host distributed devices are started concurrently such that they each request from the same first network site a service to load test the ability of the first network site to handle the simultaneous requests for a service. *Armentrout* is simply measuring the performance of individual provider computers by providing a benchmark task which has known response time. In Claim 32, the first network site simultaneously receives a request for a service by concurrently executing a test program requesting the service in N Host distributed devices in a first time interval, then in a second time interval following the first time interval each of the N Host distributed devices sends a status indicating the quality of the response to their request for the service. *Armentrout* does not disclose the invention of Claim 31 or the invention of Claim 32. Therefore, the Applicant respectfully asserts that the rejections of Claim 32 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* is traversed by the above reasons and for the same reasons as Claim 31.

Claim 33 is dependent from Claim 32 and contains all the limitations of Claim 32. Claim 33 adds the limitation that the status (indicating a quality of providing the service) is generated automatically by the N Host distributed devices following the first time interval. The Applicant has shown that *Armentrout* does not disclose the invention of Claim 31. Further, the Applicant has shown that *Armentrout* does not disclose the limitation of Claim 32. The Examiner states that *Armentrout* discloses the invention of Claim 33 and cites "job monitoring, page 10. lines 10-15." In this recitation, *Armentrout* discloses monitoring of a task (job) executed by a provide computer. *Armentrout* discloses that the status of a job may be selectively monitored. A status of a job would include: has the job execution started, how much of job is complete, etc. In Claim 33, each of the N Host distributed devices executes currently a test program requesting a service from the first network site. The status of Claim 33 is not about the test program per se; rather, the status of Claim 33 is about the "service" requested from the first network site. The Applicant has shown that *Armentrout* does not disclose the invention of Claim 31 and Claim 32. Therefore, the

Applicant respectfully asserts that the rejections of Claim 32 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* is traversed by the above reasons and for the same reasons as Claims 31 and 32.

Claim 34 is dependent from Claim 32 and contains all the limitations of Claim 32. Claim 33 adds the limitation that the status (indicating a quality of providing the service) is generated in response to a request from the Server system. The Applicant has shown that *Armentrout* does not disclose the invention of Claim 31. Further, the Applicant has shown that *Armentrout* does not disclose the limitation of Claim 32. The Examiner states that *Armentrout* discloses the invention of Claim 34 and cites "for example, while updating the provider computer's capabilities and availability, page 22, lines 19-21" of *Armentrout*. In this recitation, *Armentrout* discloses that the system measures CPU speed, etc. (of the provider systems) and these measures are periodically updated to ensure that the system has knowledge of the full availability of the provider systems. In Claim 34, the Server requests that the N Host distributed systems provide status (indicating a quality of providing the service). There is no disclosure by *Armentrout* regarding status (indicating a quality of providing the service) as recited in Claim 34. The Applicant has shown that *Armentrout* does not disclose the invention of Claim 31 and Claim 32. Therefore, the Applicant respectfully asserts that the rejections of Claim 32 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* is traversed by the above reasons and for the same reasons as Claims 31 and 32.

Regarding Claims 32-34, the Examiner states that *Armentrout* does not specifically disclose quality of service status. Claim 32 recites the "status indicating a quality of providing the service (concurrently requested by the N Host distributed devices from the first network site when executing the test program)." The status of Claim 32 is a particular status not a generic quality of service status. The Examiner states that Vaid teaches that quality of service testing is well known and cites Vaid, column 2, lines 5-14, column 4, lines 7-55, and column 10, lines 9-22. The present

invention is not claiming generic "quality of service" as disclosed by Vaid; rather, the present invention is load testing a first network site by having N Host distributed devices execute a test program currently during a first time interval so that a service (same or different) is requested from the first network site (also currently during the first time interval). Claims 32-34 contain all the limitations of Claim 31. The Applicant has shown that *Armentrout* does not disclose the invention of Claim 31. Vaid discloses a method for monitoring generic quality of service and the Examiner offers no evidence that Vaid adds anything to *Armentrout* regarding Claim 31. The Examiner relies on Vaid to support his argument that Vaid teaches that quality of service is well known. The present invention is not claiming the concept of quality of service; rather, Claim 31 is claiming a particular status indicating a quality of providing the service (requested by the N Host distributed devices of Claim 31) in response to concurrently executing the test program in the N Host distributed devices during a first time interval requesting the service from the first network site. The invention of Vaid does teach or suggest the invention of Claim 31. The Applicant has shown that *Armentrout* does not disclose the invention of Claim 31. The Applicant has shown that *Armentrout* does not disclose the inventions of Claims 32-34. Vaid does not add anything that would lead one of ordinary skill in the art to arrive at the invention of Claims 32-34 by combining his teachings with the disclosure of *Armentrout*. The Applicant asserts that *Armentrout* and Vaid do not teach or suggest, singly or in combination, the invention of Claims 32-34. Therefore, the Applicant respectfully asserts that the rejections of Claims 32-34 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* in view of Vaid are traversed by the above reasons and for the same reasons as Claim 31.

Claim 42 has been amended to correctly depend from Claim 32 where "quality of service" is introduced. Claim 42 is dependent from Claim 32 and contains all the limitations of Claim 32. Amended Claim 42 adds the limitation that the quality of service (indicated by the status of Claim 32) is a response time in providing the service (in response to the test program executing concurrently on the N Host

distributed devices and requesting the service from the first network site) to a particular one of the N Host distributed devices. The Examiner further states that *Armentrout* discloses a response time as an indicator of status and cites (sic) column 18, lines 17-22. The Applicant could not find this reference. If the Examiner meant page 18, lines 17-22, then *Armentrout* discloses that if a provider computer working on a particular task does not respond in a pre-set time, then the task may be assigned to another provider computer. *Armentrout*'s response time is regarding actions of the provider computers and not response time of the first network site in providing the service to the N Host distributed devices of Claim 42. Nowhere does *Armentrout* disclose or suggest the invention of Claim 42. The Examiner offers no evidence that Vaid adds anything to the disclosure of *Armentrout* regarding the invention of Claim 42. Claim 44 is directed to a computer program product implementing the method of Claim 32. Claim 54 has been amended to correctly depend from Claim 44. Amended Claim 54 adds the same limitations to Claim 44 as Claim 42 adds to Claim 32. The Examiner rejected Claim 54 for the same reasons as Claim 42. Therefore, the Applicant respectfully asserts that the rejections of Claims 42 and 54 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* in view of *Vaid* is traversed by the above reasons and for the same reasons as Claims 32 and 44.

Claim 43 is directed to a computer program product implementing the method of Claim 31. Claim 44 is dependent from Claim 43 and contains all the limitations of Claim 43. Claims 45-46 are dependent from Claim 44 and contain all the limitations of Claim 44. The Examiner rejected Claims 44-46 for the same reasons as Claims 32-34. The Examiner offers no evidence that Vaid adds anything to the disclosure of *Armentrout* regarding the invention of Claim 43. Therefore, the Applicant respectfully asserts that the rejections of Claims 44-46 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* in view of *Vaid* is traversed by the above reasons and for the same reasons as Claims 31 and 43.

The Examiner rejected Claims 41 and 53 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* in view of U.S. Patent No. 6,052, 584 to *Harvey et al.* (hereafter "*Harvey*").

Claim 41 is dependent from Claim 31 and contains all the limitations of Claim 31. Claim 31 recites a method of operating a distributed processing system having a network coupling a number M of Host distributed devices to process workloads for the distributed processing system, a plurality of Client systems requesting processing of the workloads, one or more network sites coupled to the network for providing services upon request to a multiplicity of Host distributed devices including at least the M Host distributed devices, and a Server system for selectively distributing the workloads for processing by the distributed processing system comprising the three steps. *Harvey* discloses testing Code Division Multiple Access (CDMA) cellular systems, analysis, and optimization. A cellular system is not a distributed processing system as recited in Claim 31. *Harvey* describes placing stationary load box test units about a selected cell and transmitting predetermined signals from the test units. No one of ordinary skill in the art would look to *Harvey* for information regarding testing a network site using N Host distributed devices selected from M Host distributed devices coupled to a network to form a distributed processing system. *Harvey* has to place test units about a cell. The present invention makes use of the fact that a distributed processing system comprising M Host distributed devices coupled to process workloads for the distributed processing system may be used to test a network site which is also coupled to the network. The present invention utilizes Host distributed devices coupled for one purpose for an entirely different purpose. *Harvey* teaches away from the present invention by providing specialized test units which have to be physically placed around the cell under test. The Applicant asserts that one of ordinary skill in the art cannot combine the teachings of *Armentrout* and *Harvey* to arrive at the invention of Claim 31 The Examiner states that *Harvey* teaches the limitation of Claim 41 wherein the first time interval is selected to coincide with a peak time, the first network site receives requests from the

multiplicity Host distributed devices excluding the N Host distributed devices and cites *Harvey*, "a mobile unit traverses the cell along a predetermined path and response info is recorded" in the abstract. *Harvey* describes that while his specialized test units physically placed around a cell are sending signals to the cell, he has a mobile test unit follow a predetermined path and make a cell phone call to at least one of the stationary test units. The Applicant asserts that no one of ordinary skill in the art would arrive at the invention of Claim 41 using *Armentrout* and *Harvey*'s CDMA test method employing specialized test units placed around a cell with a mobile test unit physically traversing the cell on a predetermined path. Claim 41 is reciting the method of Claim 31 wherein the first time interval, when the test programs in each of the N Host distributed devices concurrently request a service from a first network site, is selected to coincide with a peak time when it is known that other devices not within the N Host distributed devices will be requesting service from the first network site. The Applicant asserts that neither *Armentrout* nor *Harvey*, singly or in combination, teach or suggest the invention of Claim 41. The Examiner has shown no evidence that *Harvey* adds anything to the disclosure of *Armentrout* relative to Claim 31. The Applicant has shown that *Armentrout* does not disclose the invention of Claim 31. Claim 43 is directed to a computer program product that implements the method steps of Claim 31. The Examiner rejected Claim 53 for the same reasons as Claim 41. Therefore, the Applicant respectfully asserts that the rejections of Claims 41 and 53 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* in view of *Harvey* are traversed by the above reasons and for the same reasons as Claims 31 and 43.

The Examiner rejected Claim 55 under *35 U.S.C. §103(a)* as being unpatentable over *Armentrout* in view of *Vaid.*

Claim 55 is an independent claim directed to a software agent operating within each of a multiplicity of Host distributed devices coupled to a network, the network configured to enable a Server system to selectively couple the multiplicity of Host distributed devices to perform workloads for a distributed processing system, the

software agent comprising a program of instructions for performing a series of program steps for managing the distributed processing system in a particular way to test a site coupled to the network. In step (1), a request is received from the server system to process a test program workload in one of the multiplicity of Host distributed devices for testing a site coupled to the network. In step (2), the test program and a predetermined first time interval are received, the test program configured to request a service by accessing the site. In step (3), an execution of the test program is started in a first Host distributed device selected from the multiplicity of Host distributed devices at the first time interval. And in step (4), a status is sent to the Server system at a second time following the first time-interval, the status indicating a quality of service provided to the first Host distributed device (from the site) at the first time interval.

The Examiner states that *Armentrout* discloses the elements in the pre-amble of Claim 55 and cites various references of *Armentrout* used in the Examiner in his arguments that *Armentrout* disclosed the method of Claim 31. The Examiner states that *Armentrout* discloses the test program of Claim 55 and cites "benchmark test to access capabilities, page 19, lines 18-21. In Claim 55, the test program workload is processed in one of the multiplicity of Host distributed devices for testing a site coupled to the network. While the site is coupled to the network, Claim 55 does not include it as one of the multiplicity of Host distributed devices coupled to the network to process workloads for the distributed processing system. The test programs of *Armentrout* are used to test the capabilities of the provider computers (distributed devices). Nowhere does *Armentrout* disclose testing a site, *Armentrout* only discloses capability testing. The Examiner states that *Armentrout* discloses the predetermined first time interval and cites *Armentrout*, page 9, lines 12-14. In this recitation, *Armentrout* states "In addition, the API defines entry points that allow the environment to control the task. These include: Start a task (note that restarting a task is a special case of starting a task)". While *Armentrout* discusses starting a task, he does not disclose sending a first time interval to the software agent in a Host

distributed device. *Armentrout* indicates that starting a task or "launching" a task is considered done when the server puts the task into a queue. Earlier the Examiner cited virtual cluster described on page 3, lines 1-2 of *Armentrout* as disclosing the N Host distributed devices and "simultaneous execution", page 24, lines 16-17 of *Armentrout* as disclosing "concurrently starts execution of the test program at the first time interval as recited in Claim 31. *Armentrout* states on page 24, lines 16-17 that "The system launches the task simultaneously on all the provider computers that comprise a **virtual node**. *Armentrout* further describes what he means by the term "launched" with the following "As noted earlier the task is "launched" when it is scheduled. Earlier refers to the following on page 20, lines 7-12 of *Armentrout*:

"After the client defines the tasks to be executed, they are provided to the central server of the present invention for "launching," i.e., the placement of the task in a queue for scheduling and ultimate distribution to provider computers. For billing and compensation purposes, a task is "launched" when it is scheduled. In this way, the latency from a task sitting in queue is attributed to the provider computer and so considered part of the provider computer's intermittent "unavailability." The Applicant asserts that "starting a task", according to *Armentrout*, is not the same as Claim 55 as it does not disclose the predetermined first time interval of Claim 55.

The Examiner states that *Armentrout* discloses "the test program configured to request a service by accessing the site and cites "benchmark tests and test tasks with known results", page 19, lines 18-21 and "for example checking bandwidth", page 25, lines 19-21. The Applicant has shown relative to Claim 31, that testing the capabilities of provider computers does not disclose site testing according to the present invention. Claim 55 is directed to the software agent that facilitates site testing according to the invention of Claims 31 and 55. The Examiner states that *Armentrout* discloses an execution of the test program started in a first Host distributed device selected from the multiplicity of Host distributed devices at the first time interval and cites *Armentrout*, page 9, lines 12-14. The Applicant has shown in

the preceding arguments that "starting a task", "launching a task", etc., by *Armentrout* do not read on Claim 55, wherein Host distributed devices receive a first time interval which is used to concurrently or simultaneously start execution of a test program requesting a service from a site. *Armentrout* does not disclose or suggest site testing as recited in Claims 31 and 55 and there is no motivation for *Armentrout* to start task execution at a particular first time interval as recited in the present invention.

The Examiner states that *Armentrout* discloses sending a status to the Server system at a second time interval following the first time interval citing "benchmark tests completed." The Applicant has shown that benchmark testing of provider computers according to *Armentrout* is not the same as site testing recited in Claims 31 and 55. Since *Armentrout* does not disclose site testing wherein test programs in the Host distributed device all request a service from the site at a first time interval, there is not motivation for *Armentrout* to request the status (the status indicating a quality of service provided to the first Host distributed device (from the site) at the first time interval) in a second time interval following the first time interval. The Examiner states that *Armentrout* discloses requesting a status but not a quality of service status. The Applicant has stated that the present invention does not claim a generic quality of service status. The status in the present invention of Claim 55 is regarding the service received in response to requesting of the service from the site in the first time interval. The Examiner states that Vaid teaches that quality of service is well known. The Applicant has shown that the teachings of Vaid do not read on the specific status indicating a quality of service obtained during site testing according to the invention of Claim 31. Claim 55 is directed to a software agent that facilitates the network site testing recited in Claim 31 and the teachings of Vaid add nothing new to what has been argued relative to Claim 31. Therefore, the Applicant respectfully asserts that the rejections of Claim 55 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* in view of *Vaid* are traversed by the above reasons and for the same reasons as Claim 31.

Claim 56 is dependent from Claim 55 and contains all the limitations of Claim 56. In Claim 55, the software agent in the Host distributed devices operates to facilitate the network site testing. The Applicant has shown that *Armentrout* does not disclose the software agent of Claim 55. The Applicant has also shown that *Armentrout* and Vaid, singly or in combination, do not teach or suggest the software agent of Claim 55. Claim 56 adds the limitation that the status (of Claim 55) is determined by monitoring a response sent to the first Host distributed device by the site following the first time interval. The Applicant has shown that neither *Armentrout* or Vaid, singly or in combination, do not teach or suggest the first time interval of Claim 55. Therefore, the Applicant respectfully asserts that the rejections of Claim 55 under *35 U.S.C. § 103(a)* as being unpatentable over *Armentrout* in view of *Vaid* are traversed by the above reasons and for the same reasons as Claims 31 and 55.

## V. CONCLUSION

Claims 36 and 48 are objected to for alleged informalities. The Applicant has traversed this objection.

The Applicant has traversed the rejections of Claims 35 and 47 under *35 U.S.C. § 112*, first paragraph, as failing to comply with the enablement requirement.

The Applicant has traversed the rejections of Claims 31, 36-40, 43, 48-52, and 54 under *35 U.S.C. § 102(a)* as being anticipated by *Armentrout*.

The Applicant has traversed the rejections of Claims 32-34, 42, 44-46, and 54-56 under *35 U.S.C. §103(a)* as being unpatentable over *Armentrout* in view of *Vaid*.

The Applicant has traversed the rejections of Claims 41 and 53 under *35 U.S.C. §103(a)* as being unpatentable over *Armentrout* in view of *Harvey*.

Claims 35, 40-42, 47, and 52-54 have been amended to correct informalities and to correct antecedent basis problems.

The Applicant, therefore, respectfully asserts that Claims 31-56 are in condition for allowance and request an early allowance of these claims.

Applicant respectfully requests that the Examiner call Applicant's attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.

Respectfully submitted,

WINSTEAD SECHREST & MINICK P.C.

Patent Agent and Attorney for Applicant

By: Richard F. Frankeny

Richard F. Frankeny
Reg. No. 47,573
Kelly K. Kordzik
Reg. No. 36,571

P.O. Box 50784
Dallas, Texas 75201
(512) 370-2872

Austin_1\254692\1
40988-P005US 7/20/2004